

## CLAIMS

1. Method for the closed-loop speed control of an internal combustion engine-generator unit (1) during a starting operation, in which a set speed ( $n_M(SW)$ ) is preset by means of a run-up ramp (HLR), which begins with a starting speed ( $n_{ST}$ ) and ends with a rated speed ( $n_{NN}$ ), a control deviation is determined from a comparison of the set speed and actual speed ( $n_M(SW)$ ,  $n_M(IST)$ ), and a power-determining signal (QP) for controlling the actual speed ( $n_M(IST)$ ) is computed from the control deviation by a speed controller (11), characterized by the fact that a first time ( $t_1$ ) is set when the actual speed ( $n_M(IST)$ ) exceeds a limit (GW), i.e., ( $n_M(IST) > GW$ ), a second time ( $t_2$ ) is set when the actual speed ( $n_M(IST)$ ) exceeds the starting speed ( $n_{ST}$ ), i.e., ( $n_M(IST) > n_{ST}$ ), a time interval ( $dt$ ) is computed from the difference of the two times ( $t_1$ ,  $t_2$ ), and the run-up ramp (HLR) and the controller parameters of the speed controller (11) are selected as a function of the time interval ( $dt$ ).

2. Method for closed-loop speed control in accordance with Claim 1, characterized by the fact that the run-up ramp (HLR) is determined from the time interval ( $dt$ ) by a first characteristic curve (16), and the controller parameters are determined from the time interval ( $dt$ ) by other characteristic curves (17, 18).

3. Method for closed-loop speed control in accordance with Claim 2, characterized by the fact that the controller parameters are an integral-action time ( $T_N$ ) and a proportional coefficient ( $k_p$ ).

4. Method for closed-loop speed control in accordance with Claim 3, characterized by the fact that a long integral-action time ( $T_N$ ) and a large proportional coefficient ( $k_p$ ) are assigned to a long time interval ( $dt$ ) by the other characteristic curves (17, 18).

5. Method for closed-loop speed control in accordance with Claim 2, characterized by the fact that a run-up ramp (HLR) with a small slope ( $\Phi$ ) is assigned to a long time interval ( $dt$ ).

6. Method for closed-loop speed control in accordance with any of the preceding claims, characterized by the fact that an error is set if the time interval ( $dt$ ) reaches or exceeds a limit ( $dt_{GW}$ ), i.e., ( $dt \geq dt_{GW}$ ).

7. Method for closed-loop speed control in accordance with Claim 1, characterized by the fact that a time interval ( $dt_R$ ) between the present time ( $t$ ) and the first time ( $t_1$ ) is determined ( $dt_R = t - t_1$ ), and an error is set if the time interval ( $dt_R$ ) reaches or exceeds a limit ( $dt_{GW}$ ), i.e., ( $dt_R \geq dt_{GW}$ ).

8. Method for closed-loop speed control in accordance with Claim 6 or Claim 7, characterized by the fact that when the error is set, a diagnostic input occurs, and an emergency stop is activated.